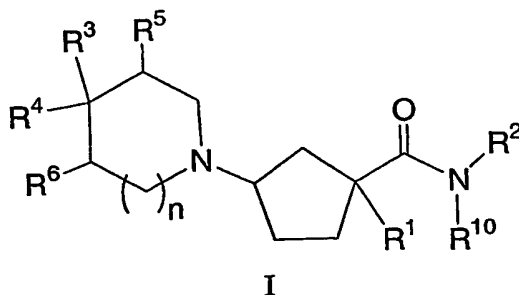


## WHAT IS CLAIMED IS:

1. A compound of the formula I:



wherein:

R<sup>1</sup> is selected from:

hydrogen,

-C<sub>0-6</sub>alkyl-Y-(C<sub>1-6</sub>alkyl)-, and

-(C<sub>0-6</sub>alkyl)-Y-(C<sub>0-6</sub>alkyl)-(C<sub>3-7</sub>cycloalkyl)-(C<sub>0-6</sub>alkyl),

where Y is selected from:

a single bond, -O-, -S-, -SO-, -SO<sub>2</sub>-, and -NR<sup>10</sup>-,

and where the alkyl and the cycloalkyl are unsubstituted or substituted with 1-7 substituents where the substituents are independently selected from:

(a) halo,

(b) hydroxy,

(c) -O-C<sub>1-3</sub>alkyl, and

(d) trifluoromethyl,

(e) C<sub>1-3</sub>alkyl,

(f) -O-C<sub>1-3</sub>alkyl,

(g) -CO<sub>2</sub>R<sup>9</sup>, wherein R<sup>9</sup> is independently selected from: hydrogen, C<sub>1-6</sub> alkyl, C<sub>5-6</sub> cycloalkyl, benzyl or phenyl, which is unsubstituted or

substituted with 1-3 substituents where the substituents are independently selected from: halo, C<sub>1-3</sub>alkyl, C<sub>1-3</sub>alkoxy and trifluoromethyl,

(h) -CN,

(i) heterocycle,

(j) -NR<sup>9</sup>R<sup>10</sup>,

(k) -NR<sup>9</sup>COR<sup>10</sup>,

(l) -NR<sup>9</sup>SO<sub>2</sub>R<sup>10</sup>, and

(m) -CONR<sup>9</sup>R<sup>10</sup>;

R<sup>2</sup> is selected from:

(C<sub>0</sub>-6alkyl)-phenyl and (C<sub>0</sub>-6alkyl)-heterocycle,

5 where the alkyl is unsubstituted or substituted with 1-7 substituents where the substituents are independently selected from:

- (a) halo,
- (b) hydroxy,
- (c) -O-C<sub>1</sub>-3alkyl,
- 10 (d) trifluoromethyl, and
- (e) -C<sub>1</sub>-3alkyl,

and where the phenyl and the heterocycle is unsubstituted or substituted with 1-5 substituents where the substituents are independently selected from:

- (a) halo,
- 15 (b) trifluoromethyl,
- (c) trifluoromethoxy,
- (d) hydroxy,
- (e) C<sub>1</sub>-6alkyl,
- (f) C<sub>3</sub>-7cycloalkyl,
- 20 (g) -O-C<sub>1</sub>-6alkyl,
- (h) -O-C<sub>3</sub>-7cycloalkyl,
- (i) -SCF<sub>3</sub>,
- (j) -S-C<sub>1</sub>-6alkyl,
- (k) -SO<sub>2</sub>-C<sub>1</sub>-6alkyl,
- 25 (l) phenyl,
- (m) heterocycle,
- (n) -CO<sub>2</sub>R<sup>9</sup>,
- (o) -CN,
- (p) -NR<sup>9</sup>R<sup>10</sup>,
- 30 (q) -NR<sup>9</sup>-SO<sub>2</sub>-R<sup>10</sup>,
- (r) -SO<sub>2</sub>-NR<sup>9</sup>R<sup>10</sup>, and
- (s) -CONR<sup>9</sup>R<sup>10</sup>;

R<sup>3</sup> is selected from:

(C<sub>0-6</sub>alkyl)-heterocycle,

where the alkyl is unsubstituted or substituted with 1-5 substituents where the substituents are independently selected from:

- (a) halo,
- (b) hydroxy,
- (c) -O-C<sub>1-3</sub>alkyl, and
- (d) trifluoromethyl,

and where the heterocycle is unsubstituted or substituted with 1-5 substituents where the substituents are independently selected from:

- (a) halo,
- (b) trifluoromethyl,
- (c) hydroxy,
- (d) C<sub>1-3</sub>alkyl,
- (e) -O-C<sub>1-3</sub>alkyl,
- (f) -CO<sub>2</sub>R<sup>9</sup>,
- (g) -CN,
- (h) -NR<sup>9</sup>R<sup>10</sup>, and
- (i) -CONR<sup>9</sup>R<sup>10</sup>;

R<sup>4</sup> is selected from:

- (a) hydrogen,
- (b) hydroxy,
- (c) C<sub>1-6</sub>alkyl,
- (d) C<sub>1-6</sub>alkyl-hydroxy,
- (e) -O-C<sub>1-3</sub>alkyl,
- (f) -CO<sub>2</sub>R<sup>9</sup>,
- (g) -CONR<sup>9</sup>R<sup>10</sup>, and
- (h) -CN;

R<sup>5</sup> and R<sup>6</sup> are independently selected from:

- (a) hydrogen,
- (b) hydroxy,
- (c) C<sub>1-6</sub>alkyl,
- (d) C<sub>1-6</sub>alkyl-hydroxy,

- (e) -O-C<sub>1-3</sub>alkyl,
- (f) oxo, and
- (g) halo;

5 R<sup>10</sup> is independently selected from:  
hydrogen, C<sub>1-6</sub> alkyl, benzyl, phenyl, and C<sub>1-6</sub> alkyl-C<sub>3-6</sub> cycloalkyl,  
which is unsubstituted or substituted with 1-3 substituents where the substituents  
are independently selected from: halo, C<sub>1-3</sub>alkyl, C<sub>1-3</sub>alkoxy and  
trifluoromethyl;

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n is an integer which is 0 or 1;

and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

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2. The compound of Claim 1 wherein R<sup>1</sup> is selected from:  
-C<sub>1-6</sub>alkyl, -C<sub>0-6</sub>alkyl-O-C<sub>1-6</sub>alkyl-, -C<sub>0-6</sub>alkyl-S-C<sub>1-6</sub>alkyl-, and  
-(C<sub>0-6</sub>alkyl)-(C<sub>3-7</sub>cycloalkyl)-(C<sub>0-6</sub>alkyl),

where the alkyl and the cycloalkyl are unsubstituted or substituted with 1-7  
substituents where the substituents are independently selected from:

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- (a) halo,
- (b) hydroxy,
- (c) -O-C<sub>1-3</sub>alkyl,
- (d) trifluoromethyl,
- (f) C<sub>1-3</sub>alkyl,

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- (g) -O-C<sub>1-3</sub>alkyl,
- (h) -CO<sub>2</sub>R<sup>9</sup>, wherein R<sup>9</sup> is independently selected from: hydrogen, C<sub>1-6</sub>  
alkyl, C<sub>5-6</sub> cycloalkyl, benzyl or phenyl, which is unsubstituted or  
substituted with 1-3 substituents where the substituents are independently  
selected from: halo, C<sub>1-3</sub>alkyl, C<sub>1-3</sub>alkoxy and trifluoromethyl,

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- (i) -CN,
- (j) -NR<sup>9</sup>R<sup>10</sup>, and
- (k) -CONR<sup>9</sup>R<sup>10</sup>.

3. The compound of Claim 1 wherein R<sup>1</sup> is selected from:

- (1) -C<sub>1-6</sub>alkyl, which is unsubstituted or substituted with 1-6 substituents where the substituents are independently selected from:
- (a) halo,
  - (b) hydroxy,
  - (c) -O-C<sub>1-3</sub>alkyl, and
  - (d) trifluoromethyl,
- (2) -C<sub>0-6</sub>alkyl-O-C<sub>1-6</sub>alkyl-, which is unsubstituted or substituted with 1-6 substituents where the substituents are independently selected from:
- (a) halo, and
  - (b) trifluoromethyl,
- (3) -C<sub>0-6</sub>alkyl-S-C<sub>1-6</sub>alkyl-, which is unsubstituted or substituted with 1-6 substituents where the substituents are independently selected from:
- (a) halo, and
  - (b) trifluoromethyl,
- (4) -(C<sub>3-5</sub>cycloalkyl)-(C<sub>0-6</sub>alkyl), which is unsubstituted or substituted with 1-7 substituents where the substituents are independently selected from:
- (a) halo,
  - (b) hydroxy,
  - (c) -O-C<sub>1-3</sub>alkyl, and
  - (d) trifluoromethyl.

4. The compound of Claim 1 wherein R<sup>1</sup> is selected from:

- (1) -CH<sub>3</sub>,
- (2) -CH<sub>2</sub>CH<sub>3</sub>,
- (3) -CH(CH<sub>3</sub>)<sub>2</sub>,
- (4) -CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>,
- (5) -CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>,
- (6) -cyclopropyl,
- (7) -cyclobutyl,
- (8) -cyclopentyl,
- (9) -CH<sub>2</sub>-cyclopropyl,
- (10) -CH<sub>2</sub>-cyclobutyl,
- (11) -CH<sub>2</sub>-cyclopentyl,
- (12) -CH<sub>2</sub>OH,

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- (13)  $-\text{C}(\text{CH}_3)_2(\text{OH})$ ,  
 (14)  $-\text{C}(\text{CH}_2\text{OH})(\text{CH}_3)_2$ ,  
 (15)  $-(\text{OH})\text{cyclobutyl}$ ,  
 (16)  $-(\text{OH})\text{cyclopentyl}$ ,  
 (17)  $-\text{C}(\text{CH}_3)_2(\text{NHCOCH}_3)$ ,  
 (18)  $-\text{C}(\text{CO}_2\text{H})(\text{CH}_3)_2$ ,  
 (19)  $-\text{O}-\text{CH}_3$ ,  
 (20)  $-\text{O}-\text{cyclopentyl}$ ,  
 (21)  $-\text{O}-\text{CH}(\text{CH}_3)_2$ ,  
 10 (22)  $-\text{S}-\text{CH}_3$ ,  
 (23)  $-\text{S}-\text{CF}_3$ ,  
 (24)  $-\text{SO}_2-\text{CH}_3$ ,  
 (25)  $-\text{S}-\text{CH}(\text{CH}_3)_2$ ,  
 (26)  $-\text{SO}_2-\text{CH}(\text{CH}_3)_2$ , and  
 15 (27)  $-\text{NH}-\text{SO}_2-\text{CH}_3$ .

5. The compound of Claim 1 wherein  $\text{R}^2$  is selected from:  
 $-(\text{C}_{0-4}\text{alkyl})\text{-phenyl}$  and  $-(\text{C}_{0-4}\text{alkyl})\text{-heterocycle}$ ,  
 where heterocycle is selected from:

20 furanyl, imidazolyl, oxadiazolyl, oxazolyl, pyrazolyl, pyrazinyl, pyridyl,  
 pyridazinyl, pyrimidyl, pyrrolyl, thiadiazolyl, thiazolyl, thienyl, and triazolyl, and  
 N-oxides thereof,

where the alkyl is unsubstituted or substituted with 1-7 substituents where the  
 substituents are independently selected from:

- 25 (a) halo,  
 (b) hydroxy,  
 (c)  $-\text{O}-\text{C}_{1-3}\text{alkyl}$ , and  
 (d) trifluoromethyl,

and where the phenyl or heterocycle is unsubstituted or substituted with 1-5 substituents  
 where the substituents are independently selected from:

- 30 (a) halo,  
 (b) trifluoromethyl,  
 (c) trifluoromethoxy,  
 (d) hydroxy,

- (e) C<sub>1-3</sub>alkyl,  
(f) -O-C<sub>1-3</sub>alkyl,  
(g) -CO<sub>2</sub>R<sup>9</sup>,  
(h) -S-C<sub>1-3</sub>alkyl,  
(i) -SO<sub>2</sub>-C<sub>1-3</sub>alkyl,  
(j) -SCF<sub>3</sub>,  
(k) -CO<sub>2</sub>R<sup>9</sup>,  
(l) -NR<sup>9</sup>R<sup>10</sup>,  
(m) -NR<sup>9</sup>-SO<sub>2</sub>-R<sup>10</sup>,  
(n) -SO<sub>2</sub>-NR<sup>9</sup>R<sup>10</sup>, and  
(o) -CONR<sup>9</sup>R<sup>10</sup>.

6. The compound of Claim 1 wherein R<sup>2</sup> is selected from:  
-(C<sub>0-4</sub>alkyl)-phenyl and -(C<sub>0-4</sub>alkyl)-heterocycle,  
where heterocycle is selected from: pyridyl, pyridazinyl, and N-oxides thereof,  
where the alkyl is unsubstituted or substituted with 1-7 substituents where the  
substituents are independently selected from:

- (a) halo,  
(b) hydroxy,  
(c) -O-C<sub>1-3</sub>alkyl, and  
(d) trifluoromethyl,

and where the phenyl or heterocycle is unsubstituted or substituted with 1-3 substituents  
where the substituents are independently selected from:

- (a) halo,  
(b) trifluoromethyl,  
(c) trifluoromethoxy,  
(d) hydroxy,  
(e) C<sub>1-3</sub>alkyl,  
(f) -O-C<sub>1-3</sub>alkyl,  
(g) -CO<sub>2</sub>-C<sub>1-3</sub>alkyl,  
(h) -CO<sub>2</sub>H,  
(i) -S-C<sub>1-3</sub>alkyl,  
(j) -SO<sub>2</sub>-C<sub>1-3</sub>alkyl,  
(k) -SCF<sub>3</sub>,

- (l) -NH<sub>2</sub>,
- (m) -NH-SO<sub>2</sub>-C<sub>1-3</sub>alkyl, and
- (n) -SO<sub>2</sub>-NH<sub>2</sub>.

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7. The compound of Claim 1 wherein R<sup>2</sup> is selected from:  
-CH<sub>2</sub>-phenyl and -CH<sub>2</sub>-heterocycle,  
where heterocycle is selected from: pyridyl, pyridazinyl, and N-oxides thereof,  
and where the phenyl or heterocycle is unsubstituted or substituted with 1-3 substituents  
where the substituents are independently selected from:

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- (a) halo,
- (b) trifluoromethyl,
- (c) trifluoromethoxy,
- (d) hydroxy,
- (e) C<sub>1-3</sub>alkyl,
- (f) -O-C<sub>1-3</sub>alkyl,
- (g) -CO<sub>2</sub>-C<sub>1-3</sub>alkyl,
- (h) -CO<sub>2</sub>H,
- (i) -S-C<sub>1-3</sub>alkyl,
- (j) -SO<sub>2</sub>-C<sub>1-3</sub>alkyl,
- (k) -SCF<sub>3</sub>,
- (l) -NH<sub>2</sub>,
- (m) -NH-SO<sub>2</sub>-C<sub>1-3</sub>alkyl, and
- (n) -SO<sub>2</sub>-NH<sub>2</sub>.

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8. The compound of Claim 1 wherein R<sup>2</sup> is selected from:

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- (1) -CH<sub>2</sub>-(phenyl),
- (2) -CH<sub>2</sub>-(4-bromophenyl),
- (3) -CH<sub>2</sub>-(3-chlorophenyl),
- (4) -CH<sub>2</sub>-(3,5-difluorophenyl),
- (5) -CH<sub>2</sub>-((2-trifluoromethyl)phenyl),
- (6) -CH<sub>2</sub>-((3-trifluoromethyl)phenyl),
- (7) -CH<sub>2</sub>-((4-trifluoromethyl)phenyl),
- (8) -CH<sub>2</sub>-((3-trifluoromethoxy)phenyl),
- (9) -CH<sub>2</sub>-((3-trifluoromethylthio)phenyl),



- (10) -CH<sub>2</sub>-((3-trifluoromethoxy-5-thiomethyl)phenyl),
- (11) -CH<sub>2</sub>-((3-trifluoromethoxy-5-methoxy)phenyl),
- (12) -CH<sub>2</sub>-((3-trifluoromethoxy-5-methanesulfonyl)phenyl),
- (13) -CH<sub>2</sub>-((3-trifluoromethoxy-5-amino)phenyl),
- (14) -CH<sub>2</sub>-((3-trifluoromethoxy-5-aminomethanesulfonyl)phenyl),
- (15) -CH<sub>2</sub>-((3-trifluoromethoxy-5-sulfonylamino)phenyl),
- (16) -CH<sub>2</sub>-((3,5-bis-trifluoromethyl)phenyl),
- (17) -CH<sub>2</sub>-((3-fluoro-5-trifluoromethyl)phenyl),
- (18) -CH(CH<sub>3</sub>)-((3,5-bis-trifluoromethyl)phenyl),
- (19) -C(CH<sub>3</sub>)<sub>2</sub>-((3,5-bis-trifluoromethyl)phenyl),
- (20) -CH<sub>2</sub>-(4-(2-trifluoromethyl)pyridyl),
- (21) -CH<sub>2</sub>-(5-(3-trifluoromethyl)pyridyl),
- (22) -CH<sub>2</sub>-(5-(3-trifluoromethyl)pyridazinyl),
- (23) -CH<sub>2</sub>-(4-(2-trifluoromethyl)pyridyl-N-oxide), and
- (24) -CH<sub>2</sub>-(5-(3-trifluoromethyl)pyridyl-N-oxide).

9. The compound of Claim 1 wherein R<sup>3</sup> is heterocycle,  
 where the heterocycle is selected from: imidazole, pyrimidyl, triazole or tetrazole, and  
 where the heterocycle is unsubstituted or substituted with 1-5 substituents where the  
 substituents are independently selected from:

- (a) halo,
- (b) trifluoromethyl,
- (c) hydroxy,
- (d) C<sub>1-3</sub>alkyl,
- (e) -O-C<sub>1-3</sub>alkyl,
- (f) -CO<sub>2</sub>R<sup>9</sup>,
- (g) -CN,
- (h) -NR<sup>9</sup>R<sup>10</sup>, and
- (i) -CONR<sup>9</sup>R<sup>10</sup>.

10. The compound of Claim 1 wherein R<sup>3</sup> is heterocycle,  
 where the heterocycle is unsubstituted or substituted with 1-3 substituents where the  
 substituents are independently selected from:

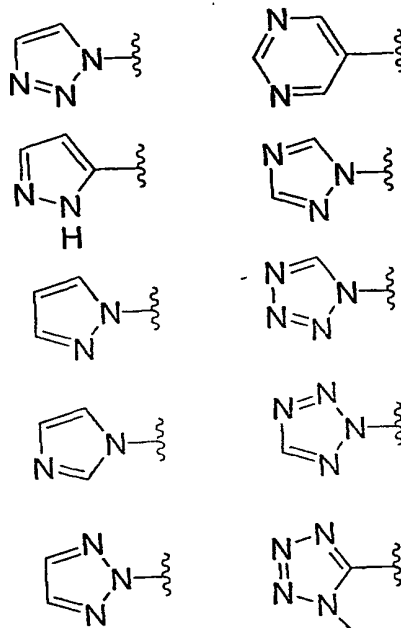
- (a) halo,

- (c) hydroxy,
- (d) C<sub>1-3</sub>alkyl,
- (e) -O-C<sub>1-3</sub>alkyl, and
- (f) -CO<sub>2</sub>R<sup>9</sup>.

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11. The compound of Claim 1 wherein R<sup>3</sup> is selected from: imidazole, pyrimidyl, triazole or tetrazole.

12. The compound of Claim 1 wherein R<sup>3</sup> is selected from:



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13. The compound of Claim 1 wherein R<sup>4</sup> is selected from:

- (a) hydrogen,
- (b) hydroxy,
- (c) -CO<sub>2</sub>H,
- (d) -CO<sub>2</sub>C<sub>1-6</sub>alkyl,
- (e) -CN.

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14. The compound of Claim 1 wherein R<sup>4</sup> is hydrogen.

15. The compound of Claim 1 wherein R<sup>5</sup> and R<sup>6</sup> are independently selected from:

- (a) hydrogen,
- (b) hydroxy,
- (c) -CH<sub>3</sub>,
- (d) -O-CH<sub>3</sub>, and
- (e) oxo.

16. The compound of Claim 1 wherein R<sup>5</sup> is independently selected from:

- (a) hydrogen,
- (b) -CH<sub>3</sub>, and
- (c) -O-CH<sub>3</sub>.

17. A compound which is selected from the group consisting of the title compounds of the Examples, and pharmaceutically acceptable salts and individual diastereomers thereof.

18. A pharmaceutical composition which comprises an inert carrier and a compound of Claim 1.

19. A method for modulation of chemokine receptor activity in a mammal in need thereof which comprises the administration of an effective amount of the compound of Claim 1.

20. A method for treating, ameliorating or controlling an inflammatory or immunoregulatory disorder or disease which comprises administering to a patient in need thereof an effective amount of the compound of Claim 1.

21. A method for reducing the risk of an inflammatory or immunoregulatory disorder or disease which comprises administering to a patient in need thereof an effective amount of the compound of Claim 1.

22. A method for treating, ameliorating or controlling rheumatoid arthritis which comprises administering to a patient in need thereof an effective amount of the compound of Claim 1.